

## CLAIMS

1. A positioning jig device for a vehicle body frame, comprising:

5       a positioning jig (20) for positioning and fixing a vehicle body frame (12);

10       a positioning robot (22) for holding an end of said positioning jig (20), supplying said positioning jig (20) to a working position for said vehicle body frame (12), and positioning said vehicle body frame (12) in a desired attitude; and

15       a positioning jig holder mechanism (24) for movably holding said positioning jig (20), said positioning jig holder mechanism (24) being disposed in said working position and having an engaging member (172) which is detachably engageable with another end of said positioning jig (20) whose one end is held by said positioning robot (22).

20       2. A positioning jig device according to claim 1, wherein said positioning jig (20) has a securing unit (50) for positioning and fixing said vehicle body frame (12).

25       3. A positioning jig device according to claim 1, wherein said positioning jig (20) has a recess (118) engageable by said engaging member (172) of said positioning jig holder mechanism (24).

4. A positioning jig device according to claim 1,  
wherein said positioning robot (22) comprises a multiaxis  
robot (22) for setting said vehicle frame (12) to the  
desired attitude while the other end of said positioning jig  
5 (20) is engaging said engaging member (172) of said  
positioning jig holder mechanism (24).

5. A positioning jig device according to claim 1,  
wherein said positioning jig holder mechanism (24) has a  
10 support (134) by which said engaging member (172) is  
swingably supported and which supports said engaging member  
(172) for displacement toward the other end of said  
positioning jig (20).

15 6. A positioning jig device according to claim 5,  
wherein said support (134) supports said engaging member  
(172) for rotation about an axis along which said engaging  
member (172) is displaceable.

20 7. A positioning jig device according to claim 5,  
wherein said support (134) has an attitude securing member  
(140) for securing the attitude with respect to the other  
end of said positioning jig (20).

25 8. A positioning jig device according to claim 5,  
wherein said engaging member (172) is supported by said  
support (134) for displacement toward the other end of said

positioning jig (20) through a resilient member (166).

5        9. A positioning jig device according to claim 5,  
wherein said engaging member (172) is actuatable by an  
actuating mechanism (170) for engagement with the other end  
of said positioning jig (20).

10       10. A positioning jig device according to claim 1,  
including a welding robot (26) disposed in said working  
position for welding said vehicle body frame (12) which is  
positioned and fixed by said positioning jig (20).